Sample Web Application Deployment Guide

Prerequisites

- AWS Account
- Terraform
- kubectl
- AWS CLI
- Docker

Infrastructure Provisioning

1. Configure AWS Credentials
   - Aws configure

2. Initialize Terraform
   - terraform init

3. Plan the Infrastructure
   - terraform plan

4. Apply the Infrastructure
   - terraform apply

5. Configure kubectl
   - aws eks --region ap-south-1 update-kubeconfig --name simple-eks-cluster

Building and Deploying the Application

1. Build Docker Image
   - docker build -t web-app:v1 .

2. Push to Container Registry

- docker push web-app:v1

3. Deploy to Kubernetes
   - kubectl apply -f deployment.yaml

Monitoring Setup

1. Apply Prometheus Configuration and Grafan
   - kubectl apply -f prometheus-deployment.yaml
   - kubectl apply -f node-exporter.yaml
   - kubectl apply -f prometheus-config.yaml
   - kubectl apply -f grafana.yaml
   - kubectl apply -f roles.yaml

Accessing the Application

1. Get Service
   - Kubectl get service –n monitoring

Setup Pod Logs:

1. Create pod Script and execute the Script
   - Nano script.sh
   - ./ script.sh